

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An apparatus for filling at least one cavity in an article with granular or particulate material during an operation for producing said article, said apparatus comprising:
- a filling chamber containing the material;
 - a rotating wheel having at least one pocket defined in an outer circumferential surface, said at least one pocket receiving the material in the filling chamber and the outer circumferential surface defining at least part of a lateral side of said filling chamber; and
 - a conveying device adapted to position at least one article being produced and having at least one cavity to be filled with said material underneath said wheel to receive said material directly into said at least one cavity from said at least one pocket.
2. (Original) The apparatus according to claim 1, further including a stationary drum positioned inside of said rotating wheel and defining a vacuum chamber in communication with said at least one pocket over a predetermined distance of rotation of said rotating wheel.
3. (Original) The apparatus according to claim 1, wherein the at least one pocket comprises a plurality of radially inwardly diverging pockets defined in the outer circumferential surface of said rotating wheel, with a radially inner extent of said pockets being defined by a single perforated band or screen positioned against the inner circumferential surface of said wheel.

4. (Previously presented) The apparatus according to claim 1, further comprising a chute configured to supply the material to the filling chamber along a path adjacent to the wheel.

5. (Original) The apparatus according to claim 3 wherein said perforated band or screen is clamped against the inner circumferential surface of said wheel by a clamp ring positioned inside the wheel.

6. (Original) The apparatus according to claim 4, wherein the chute has a length such that the material entering said filling chamber from said chute is traveling at a velocity approximately equal to the velocity of the pockets on the outer circumferential surface of the wheel.

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7. (Currently amended) ~~The apparatus according to claim 6~~ An apparatus for filling at least one cavity in an article with granular or particulate material, said apparatus comprising:

a filling chamber containing the material;

a rotating wheel having at least one pocket defined in an outer circumferential surface, said at least one pocket receiving the material in the filling chamber and the outer circumferential surface defining at least part of a lateral side of said filling chamber;

a conveying device adapted to position at least one article having at least one cavity to be filled with said material underneath said wheel to receive said material from said at least one pocket;

a chute configured to supply the material to the filling chamber along a path adjacent to the wheel, wherein the chute has a length such that the material entering said filling chamber from said chute is traveling at a velocity approximately equal to the velocity of the pockets on the outer circumferential surface of the wheel, wherein guide vanes are provided within said filling chamber for directing the material toward said pockets in said wheel.

8. (Original) The apparatus according to claim 1, wherein said conveying device includes at least one vacuum chamber for drawing the material into the at least one cavity from the wheel.

9. (Original) The apparatus according to claim 8, wherein said conveying device includes at least one chamber having relatively higher vacuum and at least one chamber having relatively lower vacuum, with the at least one higher vacuum chamber being positioned underneath a cavity being filled with material from a pocket in said wheel.

10. (Currently amended) A method of filling a cavity in an article with granular material during an operation for producing said article, said method comprising:

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providing a wheel rotatable around a stationary drum defining a vacuum chamber, said wheel having at least one pocket defined in its outer periphery, and at least a portion of the outer periphery of said wheel defining at least a portion of one lateral side of a filling chamber

rotating said wheel around said stationary drum and creating a vacuum in said vacuum chamber;

dropping said material into said filling chamber, and

communicating said vacuum to said at least one pocket over a distance from when said at least one pocket is positioned along said one side of said filling chamber and interrupting said vacuum at a point at which material in said at least one pocket is transferred directly from said at least one pocket to a cavity in an article being produced.

11. (Currently amended) ~~The method according to claim 10, further including:~~ A method of filling a cavity in an article with granular material, said method comprising:

providing a wheel rotatable around a stationary drum defining a vacuum chamber, said wheel having at least one pocket defined in its outer periphery, and at least a portion of

the outer periphery of said wheel defining at least a portion of one lateral side of a filling chamber;

rotating said wheel around said stationary drum and creating a vacuum in said vacuum chamber;

dropping said material into said filling chamber;

communicating said vacuum to said at least one pocket over a distance from when said at least one pocket is positioned along said one side of said filling chamber and interrupting said vacuum at a point at which material in said at least one pocket is transferred to a cavity in an article; and

blowing air through said at least one pocket when said at least one pocket is positioned over a cavity in an article to assist in emptying said pocket into said cavity.

B1 12. (Withdrawn) An apparatus for filling at least one cavity in an article with granular or particulate material, said apparatus comprising: a filling chamber into which said granular or particulate material is dropped through a top opening; a stationary vacuum chamber; and a plurality of spaced apart receptacles wherein each of said receptacles is mounted for movement past the stationary vacuum chamber and into alignment with a corresponding cavity in an article, said receptacles being in communication with a vacuum created in said stationary vacuum chamber from a first point at which said granules or particles are introduced into said receptacles from said filling chamber to a second point near where the granules or particles are inserted into the corresponding cavities.

13. (Withdrawn) The apparatus according to claim 12, wherein said plurality of spaced apart receptacles are formed in the outer periphery of a wheel that rotates around said stationary vacuum chamber.

14. (Withdrawn) The apparatus according to claim 13, wherein a vacuum rail is provided for supporting and moving an article having cavities to be filled with granules or particles underneath said wheel.

15. (Withdrawn) The apparatus according to claim 14, wherein said vacuum rail includes a vacuum that pulls granules or particles from said receptacles into said cavities and cleans away loose granules or particles positioned on said article outside of said cavities.

16. (Withdrawn) The apparatus according to claim 15, further including a drop chute positioned above said filling chamber and through which granules or particles are dropped to accelerate under the influence of gravity before entering said filling chamber.

B1 17. (Withdrawn) The apparatus according to claim 16, wherein said filling chamber includes a plurality of openings on a side opposite from the side of the filling chamber where granules or particles are introduced into said receptacles.

18. (Withdrawn) The apparatus according to claim 17, wherein an air jet is provided adjacent said stationary vacuum chamber and said second point for blowing said granules or particles into said corresponding cavities.

19. (Withdrawn) The apparatus according to claim 18, wherein a single perforated band or screen defines the bottoms of a plurality of said spaced apart receptacles.

20. (Withdrawn) The apparatus according to claim 19, wherein a segmented clamp holds said perforated band or screen against the inner periphery of said wheel.

21. (Withdrawn) A system for filling at least one cavity in an article with granular or particulate material, said system comprising: at least one insertion station, said insertion

station including a filling chamber into which said granular or particulate material is dropped through a top opening; a stationary vacuum chamber; and a plurality of spaced apart receptacles wherein each of said receptacles is mounted for movement past the stationary vacuum chamber and into alignment with a corresponding cavity in an article, said receptacles being in communication with a vacuum created in said stationary vacuum chamber from a first point at which said granules or particles are introduced into said receptacles from said filling chamber to a second point near where the granules or particles are inserted into the corresponding cavities.

B 1. 22. (Withdrawn) The system according to claim 21, wherein two of said insertion stations are provided with a first one of said two insertion stations at least partially filling a cavity in an article with particles, and a second one of said two insertion stations adding more of the particles or a different material to the same or a different cavity in the article.

23. (Currently amended) ~~The apparatus according to claim 1~~ An apparatus for filling at least one cavity in an article with granular or particulate material, said apparatus comprising:
a filling chamber containing the material;
a rotating wheel having at least one pocket defined in an outer circumferential surface, said at least one pocket receiving the material in the filling chamber and the outer circumferential surface defining at least part of a lateral side of said filling chamber; and
a conveying device adapted to position at least one article having at least one cavity to be filled with said material underneath said wheel to receive said material from said at least one pocket,

wherein a first insertion station comprises said filling chamber and said rotating wheel, said first insertion station adapted to at least partially fill said at least one cavity of said at least one article with the material; and

said apparatus further including a second insertion station comprising another filling chamber and rotating wheel adapted to top off said at least partially filled cavity with additional material.

24. (Currently amended) ~~The method according to claim 10~~ A method of filling a cavity in an article with granular material, said method comprising:

providing a wheel rotatable around a stationary drum defining a vacuum chamber, said wheel having at least one pocket defined in its outer periphery, and at least a portion of the outer periphery of said wheel defining at least a portion of one lateral side of a filling chamber;

rotating said wheel around said stationary drum and creating a vacuum in said vacuum chamber;

dropping said material into said filling chamber, and

communicating said vacuum to said at least one pocket over a distance from when said at least one pocket is positioned along said one side of said filling chamber and interrupting said vacuum at a point at which material in said at least one pocket is transferred to a cavity in an article, wherein said wheel and said filling chamber are part of a first insertion station, and said material is transferred to the cavity in said article to at least partially fill said cavity;

moving said article such that said at least partially filled cavity is positioned under a second insertion station downstream from said first insertion station in the direction of movement of said article and topping off said cavity with additional material from said second insertion station.

25. (New) The apparatus according to claim 23, further including a stationary drum positioned inside of at least one of said rotating wheels and defining a vacuum chamber in communication with said at least one pocket over a predetermined distance of rotation of said at least one of said rotating wheels.

26. (New) The apparatus according to claim 23, wherein the at least one pocket comprises a plurality of radially inwardly diverging pockets defined in the outer circumferential surface of at least one of said rotating wheels, with a radially inner extent of said pockets being defined by a single perforated band or screen positioned against the inner circumferential surface of said at least one of said rotating wheels.

27. (New) The apparatus according to claim 23, further comprising a chute configured to supply the material to at least one of the filling chambers along a path adjacent to at least one of the rotating wheels.

28. (New) The apparatus according to claim 26 wherein said perforated band or screen is clamped against the inner circumferential surface of said at least one of said rotating wheels by a clamp ring positioned inside the wheel.

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29. (New) The apparatus according to claim 27, wherein the chute has a length such that the material entering said at least one said filling chambers from said chute is traveling at a velocity approximately equal to the velocity of the pockets on the outer circumferential surface of said at least one of the rotating wheels.

30. (New) The apparatus according to claim 29, wherein guide vanes are provided within said at least one of said filling chambers for directing the material toward said pockets in said at least one of the rotating wheels.

31. (New) The apparatus according to claim 23, wherein said conveying device includes at least one vacuum chamber for drawing the material into the at least one cavity from the at least one of the rotating wheels.

32. (New) The apparatus according to claim 31, wherein said conveying device includes at least one chamber having relatively higher vacuum and at least one chamber having relatively lower vacuum, with the at least one higher vacuum chamber being positioned underneath a cavity being filled with material from a pocket in said at least one of the rotating wheels.
